ENVIRONMENTAL ASSESSMENT

United States Department of the Interior
Bureau of Land Management
Bishop Field Office
351 Pacu Lane; Suite 100
Bishop, CA 93514

EA Number: DOI-BLM-CAC-070-2009-51-EA

Lease/Serial/Case File No.:

Proposed Action Title/Type: Stringer Meadow/Lower Summers Meadow Near Lek Sagebrush Habitat Restoration/Improvement Project

Location of Proposed Action: Stringer Meadow (Lek 9) and Lower Summers (Lek 10) Lek Vicinities, Mono County, California; Bishop RMP Bodie Hills and Bridgeport Valley Management Areas; Stringer Meadow Vicinity - T. 3 N., R. 25 E., NE ¼ Section 2 and T. 4 N., R. 25 E., SE ¼ Section 36, MDM; Lower Summers Meadow Vicinity - T. 4 N., R. 25 E., portions of Sections 21, 27, 28, 33 and 34, MDM (Map 1).

Applicant (if any): BLM Wildlife Habitat Improvement Project

Plan Conformance:

This proposed action is subject to the Bishop Resource Management Plan (RMP), approved March 25, 1993 (USDI BLM 1993). The proposed action was developed and designed to implement RMP guidance and to ensure conformance with the General Polices, Area Manager's Guidelines, Valid Existing Management, Standard Operating Procedures, Decisions and Support Needs prescribed in the Bishop RMP. The proposed action has been reviewed and is in conformance with the plan. See Purpose and Need, below, for specific RMP guidance addressed by this project.

Purpose and Need for Proposed Action:

The purpose of the proposed action is to improve and maintain habitat conditions for Greater Sage-Grouse (*Centrocercus urophasianus*) and other sagebrush associated wildlife species in the vicinity of the Stringer Meadow (Lek 9) and Lower Summers Meadow (Lek 10) leks in Mono County, California.

The proposed action was developed and designed: 1) To implement RMP guidance to improve and maintain habitat conditions for sage-grouse and other sagebrush associated wildlife species; and 2) To ensure conformance with the

General Polices, Area Manager's Guidelines, Valid Existing Management, Standard Operating Procedures, Decisions and Support Needs prescribed in the Bishop RMP.

The proposed action would implement the following Bishop RMP Decisions (USDI BLM 1993):

- Protect and enhance unique or important vegetation communities and wildlife habitats (Area-Wide Decisions, p. 17).
  - Increase to 60% the amount of sagebrush habitat within 2 miles of leks that has optimum characteristics for sage-grouse (Area-Wide Decisions, p. 17).
  - Manage sagebrush-bitterbrush areas within 2 miles of sage-grouse leks to meet desired plant community goals (Area-Wide Decisions, p. 17).
- Meet DPC goals on 1,780 acres (25%) of sagebrush-bitterbrush habitat to provide cover and forage for mule deer and sage-grouse (Bridgeport Valley Management Area Decision, p. 27).
- Meet DPC goals on 25,250 acres (50%) of sagebrush-bitterbrush habitat to provide cover and forage for mule deer, pronghorn and sage-grouse (Bodie Hills Management Area Decision, p. 32).

Additional RMP direction that supports implementation of the proposed action includes:

- Vegetation will be a key element in the plan and management will be directed toward the achievement of desired plant community goals (Area Manager's Guideline, p. 9).
- Manage candidate species, sensitive species and other species of management concern in a manner to avoid the need for listing as state or federal endangered or threatened species (Standard Operating Procedure, p. 12).

Concern over the status of sage-grouse populations throughout the western United States has resulted in several attempts to have sage-grouse listed as either threatened or endangered under the Endangered Species Act of 1973 (ESA). To date, the US Fish and Wildlife Service (Service) has received 8 petitions to list sage-grouse as either threatened or endangered in various portions of their range. On March 5, 2010 the Service announced completion of their range-wide status review of Greater Sage-Grouse populations and their finding that listing the range-wide population of Greater Sage-Grouse is warranted, but precluded by higher priority listing actions (USDI FWS 2010). The

Service also announced their finding that listing the Bi-state population of the Greater Sage-Grouse, which meets the criteria for a distinct population segment (DPS) and occurs within the proposed project area, is warranted, but precluded by higher priority listing actions (USDI FWS 2010). As a result of these findings, both the range-wide population of Greater Sage-Grouse and the Bi-state DPS of the Greater Sage-Grouse became candidates for listing under the ESA. The Service will monitor and review the status of Greater Sage-Grouse, both range-wide and within the Bi-state DPS, annually to determine if a change in listing status is warranted (USDI FWS 2010). These current findings by the Service highlight the need for the proposed action.

In November of 2004, the Bureau of Land Management (BLM) released the "National Sage-Grouse Habitat Conservation Strategy" to support the development and implementation of conservation plans and "on-the-ground" conservation actions to conserve sage-grouse at the local level (USDI BLM 2004). Conservation planning for Greater Sage-Grouse breeding populations in the proposed project area occurred under the auspices of the *Greater Sage-Grouse Conservation Plan for Nevada and Eastern California* (NDOW 2004). Both of these conservation planning efforts identify the need to develop and implement conservation actions designed to improve and maintain sage-grouse habitat.

In creating the *Greater Sage-Grouse Conservation Plan for Nevada and Eastern California* (NDOW 2004), the proposed project area was specifically addressed by the Bi-State Local Area Planning Group, Bodie Population Management Unit (PMU) as described in Appendix L of the plan. The Bodie PMU local working group, composed of local biologists, land managers, land users, and other stakeholders, identified the treatment of tree encroachment into key sage-grouse habitats as a priority for management attention. Sparsely distributed trees in the early stages of encroachment provide potential perches for avian predators and deter sage-grouse from using otherwise suitable habitat. As noted in the plan, "In general, sagebrush habitats are uniformly distributed around leks in the Bodie PMU. However, sagebrush tends to be irregularly distributed at the lower elevations, especially in the vicinities of lek 9 near US Highway 395 and lek 10 at Lower Summers Meadow. Pinyon, and to a lesser extent juniper, are the primary factors fragmenting sagebrush habitats in these areas." (NDOW 2004, Appendix L, p. 94). "Many pinyon-juniper encroached sites in the Bodie PMU provide excellent opportunities for sage-grouse habitat improvement, particularly those adjacent to leks and meadows. Pinyon-juniper encroached sites that occur between known seasonal use areas or adjacent breeding populations are also good candidates for sage-grouse habitat improvement projects. The Bodie PMU Planning Group identified the vicinities of lek 9 near US Highway 395 and lek 10 at Lower Summers Meadow as a priority for treatment to reduce pinyon-juniper encroachment in and adjacent to occupied breeding habitat." (NDOW 2004, Appendix L, p. 96).

The proposed action was developed and designed to address the following sage-grouse conservation objectives indentified by the Bodie PMU local working group: 1) Improve sage-grouse habitat quality by treating pinyon and/or juniper encroachment into key sage-grouse habitats in the Bodie PMU; and 2) Manage pinyon and juniper in the Bodie PMU to ensure long-term connectivity between sage-grouse seasonal use areas and adjacent breeding populations (NDOW 2004, Appendix L, p. 96).

The proposed action would implement the following conservation action identified by the Bodie PMU local working group in the *Greater Sage-Grouse Conservation Plan for Nevada and Eastern California* (NDOW 2004):

- Remove pinyon and/or juniper in and adjacent to currently occupied breeding habitat in the Bodie PMU using the most appropriate technique to achieve project objectives (Appendix L, p. 96).

In 2007, the BLM Bishop Field Office entered into a cooperative agreement with The Nature Conservancy (TNC) to develop a Conservation Action Plan (CAP) for the Bodie Hills. The purpose of the CAP was to inform and guide the formulation of future site-specific vegetation management strategies to protect and enhance the area's ecological integrity. As part of the CAP process, a combination of remote sensing, field surveys, and ecological modeling was used to evaluate the current condition of ecological systems in the Bodie Hills as compared to their predicted natural range of variability. The results of this analysis indicate that montane sagebrush steppe, Wyoming big sagebrush, and basin big sagebrush ecosystems in the Bodie Hills are currently "highly departed" from their natural range of variability. The analysis also indicated that low sagebrush ecosystems in the Bodie Hills are "moderately departed" from their natural range of variability. The CAP analysis identified the over representation of mid seral (Class C), late seral (Class E), and uncharacteristic (Class U) ecological classes in these ecosystems as primary contributors to this departure. Chainsaw lopping and canopy thinning of conifer trees and prescribed fire are among the recommended management strategies for restoring these ecosystems (Provencher et al. 2009).

Description of the Proposed Action:

Project Overview

The proposed action would involve chainsaw cutting and hand piling and/or lop and scatter of low density pinyon pine within 3 designated sagebrush habitat restoration/improvement units in the vicinity of the Stringer Meadow (Lek 9 complex) and Lower Summers Meadow (Lek 10) leks in the Bodie PMU. A maximum of 658 acres of tree encroached sagebrush habitats would be treated. All 3 habitat restoration/improvement units are located on public lands administered by the Bureau of Land Management (BLM), Bishop Field Office, south of the town of Bridgeport in Mono County, California (Map 1).

Habitat Restoration/Improvement Unit Descriptions

The Stringer Meadow habitat restoration/improvement unit is 59 acres in size and is located east of U.S. Highway 395 and south of the Bodie Road about 7.5 miles south of Bridgeport. Vegetation composition is classified as 91% montane sagebrush steppe and 9% low sagebrush. Existing vegetation is characterized by a mix of sagebrush dominated habitats with sparse pinyon (< 2% canopy cover) occurring in the unit. Elevation ranges from 7,200 to 7,400 feet above sea level. Slope ranges from 2 to 24% with an average slope of 10%. The unit is dominated by a westerly aspect. The Stringer Meadow habitat restoration/improvement unit has the potential to provide quality sage-grouse habitat during the spring breeding, nesting and early brood periods based on slope, aspect, vegetation types, and proximity to known sage-grouse use areas in the vicinity of the Stringer Meadow lek (Lek 9). The unit is surrounded by undeveloped public lands and adjacent undeveloped state land (Map 1).

The Lower Summers West habitat restoration/improvement unit is 195 acres in size and is located just west of the Green Creek Road and the Lower Summer Meadows Road about 5 miles south of Bridgeport. Vegetation composition is classified as 93% Wyoming big sagebrush, 3% montane sagebrush steppe, 3% barren, and about 1% irrigated meadow. Existing vegetation is characterized by a mix of sagebrush dominated habitats with sparse pinyon (< 3% canopy cover) occurring in the unit. Elevation ranges from 6,680 to 7,000 feet above sea level. Slope ranges from 0 to 25% with an average slope of 7%. The unit is characterized by a roughly equal mix of westerly and easterly aspects. The Lower Summers West habitat restoration/improvement unit has the potential to provide quality sage-grouse habitat during the spring breeding, nesting, early brood periods, and the summer and fall seasons based on slope, aspect, vegetation types, and proximity to known sage-grouse use areas in the vicinity of the Lower Summers Meadow lek (Lek 10) and Bridgeport Valley. The unit is surrounded by undeveloped public lands and adjacent undeveloped private land (Map 1).

The Lower Summers East habitat restoration/improvement unit is 404 acres in size and is located just east of the Green Creek Road and west of U.S. Highway 395 about 6 miles south of Bridgeport. Vegetation composition is classified as 90% montane sagebrush steppe and 10% low sagebrush. Existing vegetation is characterized by a mix of sagebrush dominated habitats with sparse pinyon (< 2% canopy cover) occurring in the unit. Elevation ranges from 6,960 to 7,360 feet above sea level. Slope ranges from 0 to 47% with an average slope of 12%. The unit is dominated by a northerly aspect. The Lower Summers East habitat restoration/improvement unit has the potential to provide quality sage-grouse habitat during the spring breeding, nesting, early brood periods, and the late fall and early winter seasons based on slope, aspect, vegetation types, and proximity to known sage-grouse use areas in the vicinity of the Stringer Meadow lek (Lek

9) and the Lower Summers Meadow lek (Lek 10). The unit is surrounded by undeveloped public lands (Map 1).

All 3 sagebrush habitat restoration/improvement units are reached by dirt roads that are easily accessible by truck during the normal operating season (May - November). Four-wheel drive may be required during periods of inclement weather.

Project Specifications

All live and standing dead trees exceeding 1 foot in total height within identified sagebrush habitat restoration/improvement unit boundaries would be completely severed from the stump. No live branches would be left on the stumps of cut trees. Cut stumps would not exceed, on the side adjacent to the highest ground, a maximum height of 6 inches for stumps 12 inches in diameter and larger or a maximum height of 4 inches for stumps less than 12 inches in diameter. Cut trees would be limbed and bucked to facilitate piling and/or scattering. Limbs and stems would be bucked so as not to exceed 6 feet in total length. All cut trees and all pre-existing down and dead tree material would be hand piled or scattered per the following specifications:

- Trees greater than 10 feet in height and/or greater than 6 inches in diameter at the base would be cut and piled. Trees less than 10 feet in height and less than 6 inches in diameter at the base within 100 feet of other trees would also be cut and piled. Hand piles would be constructed in a tight, compact fashion and to a height of not less than 6 feet. Pile diameter would be between 6 and 10 feet. Wherever possible, hand piles would be constructed on top of cut stumps and in openings created by the removal of larger trees. Hand piles would be burned the following fall/winter.

- Trees less than 10 feet in height and less than 6 inches in diameter at the base and greater than 100 feet from any other trees would be cut, loped and scattered. Limbs and stems would be scattered into natural openings on the ground and far enough apart to avoid piling.

The proposed action would include the following design features to avoid inadvertent impacts to other resources within identified sagebrush habitat restoration/improvement units:

- Project area access would be limited to existing roads. No off-road vehicle travel would be permitted. All project work would be conducted by hand crews working on foot.

- No project work would be allowed during periods of high fire danger. Full or partial shutdown days due to high fire danger conditions would be based on

the Inyo National Forest Project Activity Level (PAL) system. All pile burning operations would require and conform to an approved burn plan.

- ❖ All project vehicles and equipment would be equipped with spark arrestors and mufflers.

- ❖ No toxic materials or fluids would be used or disposed on site.

- ❖ No tree removal would occur in true pinyon-juniper woodland ecological sites.

- ❖ Slash piles would not be placed within or immediately adjacent to sheep bedding areas or other disturbed sites likely to have high density cheat grass infestations.

- ❖ To protect cultural resources, exclusion areas would be identified where project specific archeological surveys have identified cultural resources that could be negatively impacted by the proposed sagebrush habitat restoration/improvement work. No project work would be allowed in areas identified for exclusion.

- ❖ If previously undiscovered archaeological resources are encountered during project implementation, operations would be immediately stopped and the Bishop Field Office manager and archaeologist notified. The project would be modified to avoid impacts to any late discoveries of archaeological resources prior to the resumption of work.

- ❖ To protect extant Bodie Hills draba populations, exclusion areas would be identified in low sagebrush habitats where project specific sensitive plant surveys have identified extant Bodie Hills draba populations. No piling and/or pile burning would be allowed in low sagebrush areas identified for exclusion.

- ❖ To protect breeding and nesting birds, no project work would occur between March 1st and August 15th.

- ❖ To protect and improve habitat for pygmy rabbits, exclusion areas would be identified where project specific burrow surveys have identified extant pygmy rabbit populations and/or burrow systems. No piling and/or pile burning would be allowed in areas identified for exclusion.

No Action Alternative:

The No Action alternative would maintain the proposed habitat restoration/improvement units in their present condition. No active removal of pinyon pine and/or juniper invading low sagebrush and big sagebrush/bitterbrush habitats in the proposed project areas would occur.

Alternatives Considered but Eliminated from Further Analysis:

Prescribed Fire - Although the Bodie Hills CAP (Provencher et al. 2009) predicted that both prescribed fire and mechanical thinning treatments in mid to late seral and tree-encroached sagebrush sites would improve overall sage-grouse habitat conditions in the Bodie Hills, the effects of prescribed fire are less predictable and would create a greater level of habitat alteration and disturbance. Prescribed fire would negatively affect sage-grouse habitat quality by eliminating the existing sagebrush understory as well as the targeted trees; would result in the direct loss of potential sage-grouse nesting habitat for an estimated minimum of 25 to 50 years; and would create conditions favorable to invasive weeds.

Environmental Analysis:

AIR QUALITY

Affected Environment

The proposed project areas are not within any federal non-attainment/maintenance area under jurisdiction of the Great Basin Unified Air Pollution Control District (GBUAPCD). Federal actions are not subject to conformity determinations under 40 CFR 93.

Environmental Consequences

Impacts of the Proposed Action

Support vehicles would raise dust while accessing the project areas via dirt roads. Support vehicles and chainsaws would also emit various precursor emissions for ozone. Burning of cut-and-piled trees would produce smoke. Emission amounts from the proposed action would be negligible and short-term. The proposed action would not result in the emission of $PM_{10.}$ The proposed action would not measurably affect air quality.

Impacts of No Action

No fugitive dust, precursor emissions for ozone or smoke would be emitted as the result of the proposed project. The no action alternative would have no impact on air quality.

AREA OF CRITICAL ENVIRONMENTAL CONCERN (ACEC)

The proposed action and no action alternatives would have no effect on any designated Area of Critical Environmental Concern (ACEC) because the proposed project areas are not located within or adjacent to any designated ACEC.

CULTURAL RESOURCES

Affected Environment

As per the State Protocol Agreement (CA BLM 2007), a Class III intensive cultural resources survey was conducted for the entire project area from 08/12/2009 thru 08/19/2009 by Far Western Anthropological, Inc. Ten cultural sites were located within or immediately adjacent the proposed project areas as a result of this survey. Detailed survey results and findings are in the contract survey report CA-170-08-37 (King 2010) which is on file at the BLM Bishop Field Office.

Known and documented cultural sites per habitat restoration/improvement unit are as follows:

Stringer Meadow: 1 Site
Lower Summers West: 7 Sites
Lower Summers East: 2 Sites

Environmental Consequences

Impacts of the Proposed Action

As no work would be conducted in identified cultural sites, per project specifications (above), the proposed action would have no effect on cultural resources. Protection of cultural resources would be ensured by adjusting project boundaries or using standard avoidance procedures such as flagging and avoiding exclusion areas, directional felling and non-mechanized treatment as per the State Protocol Agreement (CA BLM 2007).

Impacts of No Action

The no action alternative would have no impact on cultural resources.

ENVIRONMENTAL JUSTICE

The proposed action and no action alternatives would have no disproportionate impact, either negative or positive, on any low-income minority because the proposed project would occur in areas of vacant public land and there are no low-income or minority populations living in the vicinity of, or dependent upon, the proposed project areas.

ESSENTIAL FISH HABITAT

The proposed action and no action alternatives would have no effect on essential fish habitat because the proposed project areas are not located within or adjacent to any designated essential fish habitats.

FARMLANDS, PRIME OR UNIQUE

The proposed action and no action alternatives would have no effect on any farmlands, prime or unique, because the proposed project areas are not located within or adjacent to any farmlands, prime or unique.

FLOOD PLAINS

The proposed action and no action alternatives would have no effect on flood plains because the proposed project areas are not located within or adjacent to any flood plains.

GLOBAL CLIMATE CHANGE

Affected Environment

United States Department of Interior, Order Number 3226, signed January 19, 2001, Evaluating Climate Change Impacts in Management Planning, is an order to ensure that climate change impacts are taken into account in connection with planning and decision making. Climate change refers to any significant change in measures of climate (e.g. temperature or precipitation) lasting for an extended period of time (decades or longer). Climate change may result from natural processes, such as changes in the sun's intensity; natural processes within the climate system (e.g. changes in ocean circulation); human activities that change the atmosphere's composition (e.g. burning fossil fuels) and the land surface (e.g. urbanization) (IPCC 2007).

“There is broad scientific consensus that humans are changing the chemical composition of our atmosphere” (Jones & Stokes August 2007). Changes in the atmosphere have likely influenced temperature, precipitation, storms, and sea level (IPCC 2007). Rising greenhouse gas (GHG) levels are likely contributing to global climate change.

The Bodie Hills CAP (Provencher et al. 2009) included global climate change scenarios in its models. Assumptions affecting the modeling of tree encroachment, based on research and communication with regional experts, were that elevated CO_2 levels would speed encroachment by fertilizing trees; and that decreased soil moisture as a result of elevated temperatures would increase the mortality of woody species and suppress the fertilizer effect. Tree ring data from western junipers in nearby mountain ranges during the drier Medieval

Period, 524-1459 years AD, were used as a surrogate for the warmer, drier future predicted to result from climate change. Tree ring data from wetter periods during the 18th to 20th centuries were used as a surrogate for a future not affected by global climate change. The results of modeling for 250 years show tree encroachment rates as increasing overall under the climate change scenario, and a gradual overall decline without climate change.

Environmental Consequences

Impacts of the Proposed Action

The proposed action would result in some contribution of greenhouse gas (GHG) emissions associated with the operation of vehicles and chainsaws required for project implementation. These contributions would not have a noticeable or measurable effect, independently or cumulatively, on a phenomenon occurring at the global scale and believed to be due to more than a century of human activities. Locally, the project would counteract the increased rate of tree encroachment into sagebrush sites predicted under the climate change scenario modeled in the Bodie Hills CAP (Provencher et al. 2009).

Impacts of No Action

The no action alternative would not contribute to GHG emissions and would have no impact on climate change at either the local or global scale. The increase in tree encroachment into sagebrush sites predicted under a climate change scenario (Provencher et al. 2009) would not be counteracted; trees would encroach into sagebrush habitats at an increasing rate.

INVASIVE, NON-NATIVE SPECIES

Affected Environment

Small cheat grass stands consisting of up to 10-15% cover are scattered throughout the project area and are most frequently associated with sheep bedding grounds or other disturbed sites. Russian thistle (*Salsola tragus*), *Descurania sophia* and non-native goosefoot (*Chenopodium* spp.) e.g. *Chenopodium album* comprise 5% or less cover and are more widely scattered. No California A-rated invasive non-native species were documented in the project area.

Environmental Consequences

Impacts of the Proposed Action

The proposed action is not expected to increase the current distribution or extent of cheat grass within the proposed project area based on the observed effects of

similar treatments, in similar sites, adjacent to the project area. Some increase in cheat grass density may occur at the base of cut trees and in the immediate vicinity of burn piles; however these increases would be localized. No large scale change in cheat grass density or distribution is expected since slash piles would not be placed within or immediately adjacent to any sheep bedding ground or other disturbed sites likely to have high density cheat grass infestations.

Impacts of No Action

The no action alternative would allow current plant succession pathways and trajectories to continue leading to an increase in pinyon density and cover. Increased tree densities would increase the risk of high intensity fire and also increase the risk of post-fire invasion of big sagebrush and low sagebrush plant communities by non-native annual grass (*Bromus tectorum*) and forb species. Absent wildfire, weed densities would fluctuate based on current and future climatic and community succession events.

NATIVE AMERICAN CULTURAL VALUES

Affected Environment

There are 11 Native American communities within, or in close proximity to, the eastern Sierra region administered by the Bishop Field Office. None of these communities are living on, or adjacent to, the proposed project areas. No treaty rights (hunting, fishing, etc.) are associated with any of these communities or with the proposed project areas.

Some members of these communities hunt and some do subsistence collecting of materials such as basket weaving materials and medicinal plants on public lands. However, this is general use and no specific “traditional use areas” have been identified by any of the tribes at this time. Any other traditional uses or use areas have not been divulged to this office.

Tribal consultation occurred during the earliest planning phases at the government to government level. Tribal consultation letters were sent via certified mail on April 20, 2010 and are on file at the BLM Bishop Field Office. Additionally, on May 5, 2010 follow-up phone calls were made to the tribes listed below in an effort to solicit tribal comments or concerns and to offer clarification and further opportunity for tribal input or field visits. No tribal issues or concerns associated with the proposed action were identified as a result of these consultations. Overall, tribal contacts expressed interest in sage-grouse conservation and were supportive of efforts to improve and maintain habitat conditions for sage-grouse populations in the eastern Sierra region.

The following eastern Sierra tribes of were consulted regarding proposed project activity in the Stringer Meadow/Lower Summers Meadow areas:

Bishop Paiute Tribe of the Owens Valley
Bridgeport Indian Colony
Mono Lake Kuzedika Indian Cultural Preservation Foundation
Mono Lake Indian Community

Environmental Consequences

Impacts of the Proposed Action

The proposed action is not expected to have any negative impacts on Native American cultural values or concerns described above because there would be no measureable effect on the natural environment upon which Native American cultural values depend.

Impacts of No Action

The no action alternative would have no effect on any Native American cultural values or concerns described above.

RANGELANDS-LIVESTOCK MANAGEMENT

The proposed action and no action alternatives would have no effect on rangelands or livestock management because the proposed project would not modify the terms and conditions of any grazing permit nor alter permitted grazing use on the Green Creek, Dog Creek or Little Mormon allotments.

RECREATION

Affected Environment

Recreation use associated with the proposed project areas and surrounding vicinity is characterized by light, infrequent dispersed use including exploration of semi-primitive backcountry roads and trails, hiking, hunting and wildlife viewing. The proposed project areas are not located within or adjacent to any developed recreational facilities. No intensive recreation use or activity occurs at or near the proposed project locations. The California Department of Fish and Game manages sage-grouse hunting in the Bodie PMU under a limited quota permit system, based on each year's estimated fall population as derived from annual lek count census data and estimated production.

Environmental Consequences

Impacts of the Proposed Action

There would be no reduction in recreational opportunities because the proposed project areas are not located within or adjacent to any developed recreational

facilities and no intensive recreation use or activity occurs within or near the proposed project locations. The proposed action would have a positive effect on recreation by enhancing hunting and wildlife viewing opportunities if sage-grouse numbers increase as a result of project implementation.

Impacts of No Action

The no action alternative would have no effect on recreation opportunities.

SOCIAL AND ECONOMIC VALUES

Affected Environment

Mono County's economy, including the town of Bridgeport, is largely dependent on natural resource-based tourism. No social or economic values are currently associated specifically with the proposed project areas.

Environmental Consequences

Impacts of the Proposed Action

The proposed action would potentially have a positive effect on social and economic values by enhancing hunting and wildlife viewing opportunities, consequently increasing tourism to the general area.

Impacts of No Action

The no action alternative would have no effect on social and economic values.

SOILS

Affected Environment

Soils are comprised of shallow to deep well-drained sandy loams in the Bodie-Pernty-Serita association. Alluvium also contains granitic parent material as well as hydrothermally altered materials. Erosion potential is moderate. Low sage sites have surface textures that range from gravel to cobbles.

Environmental Consequences

Impacts of the Proposed Action

The proposed action would involve low intensity soil disturbance, limited primarily to the localized effects of soil heating associated with burning piles of cut trees. Localized surface disturbance would also occur as a result of the crews working around individual trees during project implementation.

Impacts of No Action

The no action alternative would have no impact on existing soil conditions.

VEGETATION, including THREATENED AND ENDANGERED and SPECIAL STATUS PLANTS

Affected Environment

The dominant plant communities within the proposed project areas consist of a mosaic of big sagebrush/bitterbrush and low sagebrush with scattered pinyon. Low sagebrush sites consist of *Artemisia arbuscula* as the dominant over-story species with a native perennial grass and forb understory consisting of squirrel tail (*Elymus elymoides*), June grass *(Koleria micrantha*), Weber's needlegrass (*Achnatherum webberi),* cheat grass (*Bromus tectorum*), dwarf goldenbush (*Ericameria suffruticosa*), Mono clover (*Trifolium andersonii*), short-stem stenotus (*Stenotus acaulis*), and cushion buckwheat (*Eriogonum caespitosum*).

Big sagebrush communities are dominated by an over-story of either Wyoming big sagebrush (*Artemisia tridentata* ssp. Wyomingensis) or mountain big sagebrush (*Artemisia tridentata* ssp. *vaseyana*) and bitterbrush (*Purshia tridentata* var. *tridentata*). Understory grasses include Indian rice grass (*Achnatherum hymenoides*), western needlegrass (*Achnatherum occidentalis*), Thurber's needlegrass (*Achnatherum thurberianum*) and cheat grass (*Bromus tectorum*). Additional species include but are not limited to, currant and gooseberry species (*Ribes spp.*), curly-leaved rabbitbrush (*Chrysothamnus viscidiflorus*) and desert peach *(Prunus andersonii*).

Pinyon (*Pinus monophylla*) within the project area are dominated by small diameter (2-6" DBH) trees and are primarily restricted to the deeper soils of the big sagebrush communities with sparse pinyon encroaching into the low sage communities.

In the recently completed Bodie Hills Conservation Action Plan report (Provencher et al. 2009), several conservation and restoration objectives were developed to address the high percentage of mid seral, late seral and uncharacteristic big sagebrush and low sagebrush communities in the Bodie Hills and Bridgeport Valley management areas. Maintenance of a mosaic of communities and seral classes, with a special attention to the current lack of earlier succession classes and the requirements of special status species is one of the key conservation and restoration objectives. The overall project area currently exhibits a viable mosaic of key vegetation types, but is considered "at risk" with regard to the current encroachment of pinyon into important Greater Sage-Grouse habitats. Tree-encroached shrublands are defined as having trees that are conical, indicating age of less than 100 years (Provencher et al. 2009).

Environmental Consequences

Impacts of the Proposed Action

Selective removal of pinyon pine is expected to have minimal negative impact on the vegetation communities within the proposed project areas, as it would not require off-road vehicular access. Some existing vegetation may be crushed during the removal of pinyon, but is expected to re-sprout the following spring and summer. Small (3m diameter) pile burns would also temporarily remove some existing vegetation, but removal would be limited in overall extent and would not impair the overall long-term ecological resiliency of the affected plant communities with regard to native plant recovery. It is anticipated that extant native seed banks would not be negatively impacted by the low intensity burning of the scattered piles which would occur in fall/winter when high soil moisture conditions exist. Post burn recovery of native vegetation would be expected and has been observed on similar treatments immediately adjacent to the proposed project areas.

Example of pinyon slash pile burn with “release” of
Great Basin wild rye four months post-treatment (7/4/2008).

Impacts of No Action

The no action alternative would allow current plant succession trends to continue. Pinyon density and cover would increase, changing the current more open mosaic of low sagebrush and big sagebrush habitat types in a direction away from that prescribed by conservation and restoration goals. Increased tree densities would also accelerate the risk of high intensity wildfire and likely increase the potential for post-fire invasion of these habitats by non-native annual grass (*Bromus tectorum*) and forb species.

Threatened and Endangered Plant Species

No threatened or endangered plant species are known or likely to occur within or adjacent to the proposed project areas based on historical records, field monitoring and habitat suitability; and none were encountered during the field visit conducted on July 10, 2009. The proposed action and no action alternatives would have no effect on any federally listed threatened or endangered plant

species, or result in the destruction or adverse modification of any designated critical habitat, because none are present within or immediately adjacent to the proposed project areas.

Special Status Plant Species

Affected Environment

Special Status Plant Species are those species that have been listed by the California Native Plant Society as List 1B species, which includes plants that are rare, threatened or endangered in California and elsewhere. All of the plants constituting List 1B meet the definition of Sec. 1901, Chapter 10 (Native Plant Protection Act) or Secs. 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code, and are eligible for state listing. The Bishop Resource Management Plan stipulates yearlong protection of sensitive plants (Special Status Plant Species) and their associated habitats (USDI BLM 1993, p. 17).

The proposed project areas contains suitable habitat for the following Special Status Plant Species:

Allium autrorubens var. *autrorubens*
Arabis bodiensis - Bodie Hills rock-cress
Astragalus oophorus var. *lavinii* - Lavin's milk vetch
Cusickiella quadricostata - Bodie Hills draba

A special status plant survey of the proposed project areas occurred on July 10, 2009. Seven sites (polygons) contained *Cusickiella quadricostata* with numbers of individuals within surveyed sites ranging from <100 to >500. Plants consisted of various age-classes. These sites constitute the most western extent of *Cusickiella quadricosta* within the Bridgeport Valley and Bodie Hills management areas. No other special status plant were documented within the proposed project areas.

Typical *Cusickiella quadricostata* habitat within the proposed project areas.

Environmental Consequences

Impacts of the Proposed Action

As the proposed action specifies flagging and avoidance of sensitive plant populations, the long-term productivity and geographical extent of current populations of Bodie Hills draba would not be negatively affected. Scattered small trees, limbs and branches are beginning to encroach into the fringes of some populations, but pinyon would not be piled, stacked or burned in the flagged areas. Keeping trees from encroaching into low sage sites would help maintain and improve Bodie Hills draba habitat in the project areas over the long term.

Impacts of No Action

Under the no action alternative, habitat quality for extant populations of Bodie Hills draba in the proposed project areas would likely decline over the long term. Current plant succession trends would continue, resulting in increased pinyon cover and density in existing *Cusickiella quadricostata* habitat. Increased tree densities would also accelerate the risk of high intensity wildfire and likely increase the potential for post-fire invasion of these plant communities by non-native annual grass (*Bromus tectorum*) and forb species. These events could negatively affect the long-term viability of *Cusickiella quadricostata* populations by altering micro-site characteristics such as soil moisture availability.

VISUAL RESOURCES

Affected Environment

The Lower Summers West and Lower Summers East project areas are located within a Visual Resource Management (VRM) Class II area. The objective of VRM Class II as defined in the Bishop RMP is “to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen from key observation points, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color and texture found in the predominant natural features of the characteristic landscape.”

The Stringer Meadow project area is located within a VRM Class III area. The objective of VRM Class III as defined in the Bishop RMP is “to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention from key observation points but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.”

The basic elements of form, line, color and texture of the proposed project areas and surrounding vicinity are characterized by open sagebrush steppe habitats typical of the western Great Basin. The project areas are at the interface of pinyon-juniper woodlands with very large areas of open sagebrush steppe, where scattered trees have begun to encroach into the sagebrush. Key observation points as defined in the Bishop RMP (USDI BLM 1993) are located along the Green Creek and Lower Summers Meadow roads and U.S. Highway 395.

Environmental Consequences

Impacts of the Proposed Action

The visual impact of the proposed project would be very slight. Removing scattered encroaching trees would not move the actual woodland edge back from the sagebrush steppe area or create any new division between woodland and sagebrush steppe. The existing character of the landscape would be retained and there would be no change in the basic elements of form, line, color and texture. VRM Class II and III objectives would be met.

Impacts of No Action

Under the no action alternative, trees would be expected to gradually encroach into the sagebrush steppe habitats, with changes in line, color and texture observable over the course of decades.

WASTE, HAZARDOUS OR SOLID

Affected Environment

The proposed project area is not within or adjacent to any existing hazardous materials site.

Environmental Consequences

Impacts of the Proposed Action

The proposed action does not involve the use or storage of hazardous materials, other than fuel used in the vehicles and chainsaws. No additional hazardous materials would be brought on site or produced during project operations. The proposed action would not generate any hazardous or solid waste within the proposed project areas.

Impacts of No Action

The no action alternative would have no impact to hazardous materials.

WATER QUALITY, DRINKING-GROUND

The proposed action and no action alternatives would have no effect on water quality, either drinking or ground, because the proposed project areas are not located within or adjacent to any to any spring, stream, pond, lake or any other water body or ground water source.

WETLANDS/RIPARIAN ZONES

The proposed action and no action alternatives would have no effect on wetlands or riparian zones because the proposed project areas are not located within or adjacent to any to any wetland or riparian habitats.

WILD AND SCENIC RIVERS

The proposed action and no action alternatives would have no effect on wild and scenic rivers because the proposed project areas are not located within or adjacent to any designated wild and scenic river corridor or eligible wild and scenic river study segment corridor.

WILDERNESS

The proposed action and no action alternatives would have no effect on wilderness because the proposed project areas are not located within any designated wilderness area or designated wilderness study area.

WILDLIFE, including SENSITIVE, THREATENED AND ENDANGERED

Affected Environment

The proposed project areas are located in the vicinity of 2 Greater Sage-Grouse leks, or strutting grounds, where mating takes place during the spring breeding season. After mating, sage-grouse hens typically establish nests in suitable sagebrush or sagebrush/bitterbrush habitat in the vicinity of leks. Sage-grouse have also been observed near the project areas at other times of year. Sage-grouse have not been observed in the tree-encroached project areas, which are considered unsuitable or compromised habitat due to the natural tendency of sage-grouse to avoid trees and other tall objects which may serve as perches for avian predators (e.g. raptors which prey on young to adult sage-grouse and ravens which prey on eggs and nestlings).

Other birds using the project area may include sagebrush-obligate songbirds such as Sage Sparrow, Sage Thrasher and Brewer's Sparrow, and other birds that largely depend on shrub dominated habitats. Birds preferring pinyon woodlands are unlikely to be abundant due to the sparse, widely scattered pinyon distribution in the project areas.

Sagebrush-obligate mammals that may be in the vicinity include pygmy rabbits and sagebrush voles. Surveys have not been conducted in the project area. Pygmy rabbits are a BLM California designated sensitive wildlife species. Pygmy rabbits remain close to their distinctive-looking burrows, so their presence or absence in a specific area may often be determined with a high degree of confidence by searching for their burrows.

The proposed project areas provide some value to mule deer during the spring/fall migrations to and from higher elevation summer habitat. A small number of mule deer also use the proposed project area for cover and forage during the summer.

Environmental Consequences

Impacts of the Proposed Action

The proposed project would have no measurable detrimental effects on the current or long-term availability of habitat for any animal species known or likely to occur in vicinity of the proposed project areas. The proposed action is designed to benefit Greater Sage-Grouse by reducing habitat fragmentation and improving habitat conditions specifically in the vicinity of leks, an area crucial to their reproduction. It may also slightly benefit other sagebrush-obligate birds and mammals. Effects on pinyon associated breeding birds are expected to be negligible at both the population and species levels, as current pinyon distribution is very sparse and there will be a negligible reduction in the percentage of available pinyon-juniper habitat overall.

There may be some short-term disturbance and displacement of wildlife such as mule deer from the immediate project vicinity as the result of noise and activity associated with project implementation. No measureable detrimental effects are expected.

The project design includes locating and avoiding any pygmy rabbit burrows. Pygmy rabbits, if present, would benefit from decreased pinyon encroachment.

Impacts of No Action

As compared to the proposed action, the no action alternative would be detrimental to both the current and predicted sage-grouse habitat conditions and also negatively affect other sagebrush associated wildlife species within the project areas by failing to counteract on-going tree encroachment.

Threatened and Endangered Wildlife Species

No threatened or endangered wildlife species are known or likely to occur within or adjacent to the proposed project areas, based on historical records, field monitoring and habitat suitability. The proposed action and no action alternatives would have no effect on any federally-listed threatened or endangered wildlife species, or result in the destruction or adverse modification of any designated critical habitat, because none are present within or adjacent to the proposed project area.

Sensitive Wildlife Species

The proposed project is designed to improve habitat for Greater Sage-Grouse, a California BLM designated sensitive wildlife species. Pygmy rabbit is also a California BLM designated sensitive wildlife species which, if present in the project area, would benefit from decreased pinyon encroachment into sagebrush habitat. The proposed project is designed to avoid any adverse impacts to pygmy rabbit burrows during implementation.

Cumulative Effects:

Cumulative effects are defined as the "impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions" (40 CFR § 1508.7). A description of current conditions inherently includes the effects of past actions and serves as a more accurate and useful starting point for a cumulative effects analysis than attempting to discern the effects of individual past actions. "Generally, agencies can conduct an adequate cumulative effects analysis by focusing on the current aggregate effects of past actions without delving into the historical details of individual past actions" (CEQ Memorandum 'Guidance on the Consideration of Past Actions in Cumulative Effects Analysis' June 24, 2005). By comparing the no action alternative (current condition) to the proposed action alternative, we can discern the cumulative impact resulting from adding the incremental impact of the proposed action to the current environmental conditions and trends.

The proposed action is expected to result in an overall positive cumulative effect on sagebrush dependent plant and animal species and communities within the Bodie Hills and Bridgeport Valley areas. It would reduce tree encroachment on a total of 658 acres. Another currently planned action proposes to reduce tree encroachment on an additional 573 acres in the Bodie Hills. While no specific similar actions are currently planned in the Bodie PMU at this time, continued efforts to improve sage-grouse habitat conditions are expected and will likely include planning to reduce tree encroachment on 50 to 500 acres per year over the next 5 to 10 years. There are no identified incremental or long-term negative effects associated with implementation of the proposed action that would contribute to cumulative impacts in the larger project vicinity. The addition of the

proposed action to existing and future regional activities and impacts would not add to, or cross a threshold of, impact that would result in a significant impact on the human environment.

The no action alternative would contribute to on-going negative cumulative effects by allowing the current trend of tree encroachment to continue unchecked, further contributing to the degradation of sagebrush plant communities and sage-grouse habitat over time.

Implementation Monitoring:

BLM Bishop Field Office staff would visit the proposed project areas during project implementation as needed to ensure that contract work is conducted according to Project Specifications outlined in this document.

Effectiveness Monitoring:

Project areas would be checked for tree encroachment after 5 years and 10 years to determine if repeat treatments are needed.

As there are many other variables, it may not be possible to assess project effectiveness in terms of change in sage-grouse population size or habitat use. Lek count censuses and telemetry tracking of Greater Sage-Grouse have been ongoing in the Bodie PMU and will continue. Censuses indicate changes in population size, while telemetry tracking shows use of specific areas.

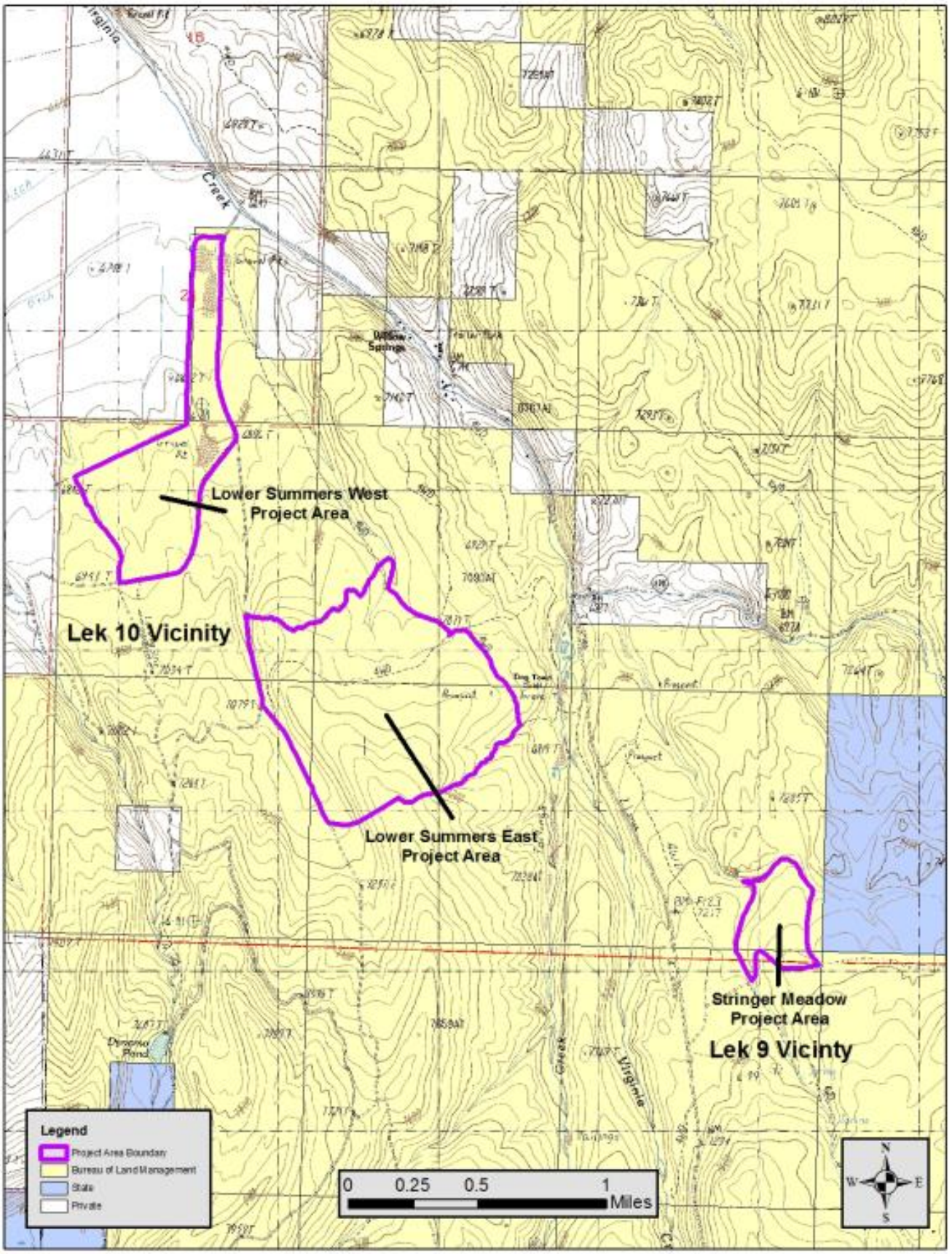
Preparer(s):

Joy Fatooh	BLM, Wildlife Biologist
Anne Halford	BLM, Botanist
Greg Haverstock	BLM, Archeologist
Jim Jennings	BLM, Outdoor Recreation Planner
William Kerwin	BLM, Archeologist
Steven Nelson	BLM, Supervisory Natural Resource Specialist
Jeff Starosta	BLM, Rangeland Management Specialist

Date: August 24, 2010

Reviewed By:

__/s/ Steve Nelson_____ **Date:** 8/24/2010____
Steven Nelson, Environmental Coordinator



Map 1. Stringer Meadow/Lower Summers Meadow Near Lek Sagebrush Habitat Restoration/Improvement Project.

Literature Cited:

CA BLM 2007. State Protocol Agreement, Protocol Supplemental Procedures for Prescribed Fire, Standard Protection Measures for Cultural Resources in Prescribed Fire Areas, Attachment 1,E.

IPCC 2007. Intergovernmental Panel on Climate Change. IPCC Fourth Assessment Report: Climate Change 2007. Available at: http://www.ipcc.ch/ipccreports/assessments-reports.htm

Jones & Stokes 2007. Climate Change Focus Group (Tony Held, Ph.D, P.E., Terry Rivasplata, AICP, Ken Bogdan, J.D., Tim Rimpo, Rich Walter). August 2007.

King, J. 2009. Archaeological Survey of Habitat Restoration Units in the Bodie Hills, Mono County, CA. Far Western Anthropological Research Group, Inc., Davis, CA. Cultural Resource Survey Report #CA-170-08-37, on file at the Bishop BLM Field Office, Bishop, CA.

Moss, S. 2009. Evaluation of Pinyon Removal Effects Typical of a Wildland-Urban Interface Fuels Reduction Project, Mono County, California: Avian Monitoring Component at Rancheria Gulch, 2009.

NDOW 2004. Greater Sage-Grouse Conservation Plan for Nevada and Eastern California. Prepared for Nevada Governor Kenny C. Guinn Sage-Grouse Conservation Team by Nevada Department of Wildlife. http://www.ndow.org/wild/conservation/sg/plan/SGPlan063004.pdf

NDOW 2004 Appendix L. Greater Sage-Grouse Conservation Plan for the Bi-State Plan Area of Nevada and Eastern California. http://www.ndow.org/wild/conservation/sg/plan/SGPlan063004_L.pdf

Provencher, L., G. Low and S. Abele. 2009. Bodie Hills Conservation Action Planning. Final Report to the Bureau of Land Management Bishop Field Office. The Nature Conservancy.

USDI BLM 1993. Bishop Resource Management Plan Record of Decision. U.S. Department of the Interior, Bureau of Land Management.

USDI BLM 2004. National Sage-Grouse Habitat Conservation Strategy. U.S. Department of the Interior, Bureau of Land Management.

USDI FWS 2010. 12-month Findings for Petitions To List Greater Sage-Grouse (*Centrocercus urophasianus*) as Threatened or Endangered: Notice of 12-Month Petition Findings. Federal Register notice 75 FR 13909-14014, March 23, 2010.

U.S. Department of the Interior, Fish and Wildlife Service.
http://ecos.fws.gov/docs/federal_register/fr5934.pdf